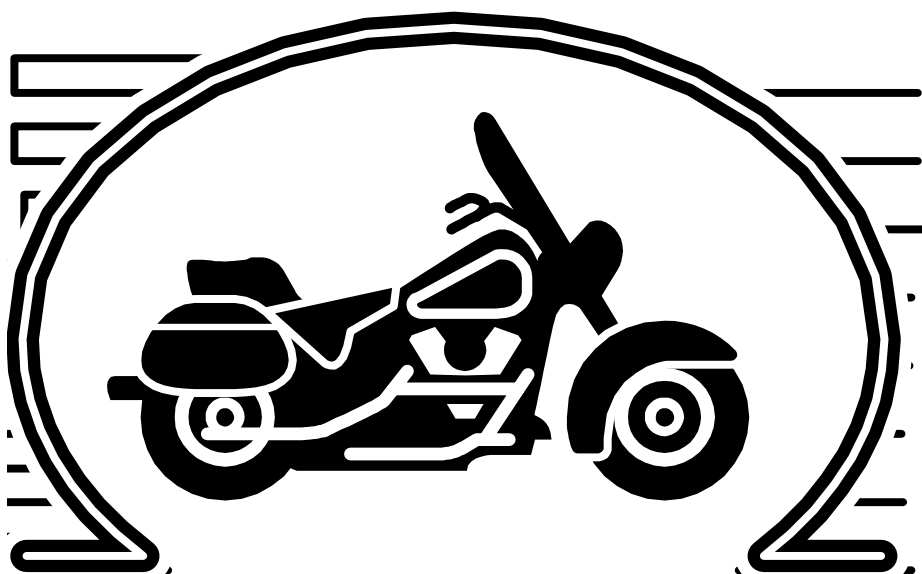


STATE OF UTAH
DEPARTMENT OF PUBLIC SAFETY



OFFICIAL SAFETY
INSPECTION MANUAL
FOR
MOTORCYCLES
2005



STATE OF UTAH
DEPARTMENT OF PUBLIC SAFETY



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OFFICIAL VEHICLE SAFETY INSPECTION MANUAL
FOR
MOTORCYCLES

Robert L. Flowers
COMMISSIONER

Col. Scott T. Duncan
SUPERINTENDENT

Lt. J.D. "York" Schulz
COMMANDER

Sergeant D Howard Madsen
PROGRAM MANAGER

Effective January 1, 2005

UTAH HIGHWAY PATROL
VEHICLE SAFETY SECTION
5500 WEST AMELIA EARHART DRIVE
SUITE #360
SALT LAKE CITY, UTAH 84116
801-322-1390 OFFICE
801-322-1817 FAX

INTRODUCTION

The Utah Highway Patrol-Vehicle Safety Inspection office has compiled this manual from many different sources. The American Association of Motor Vehicle Administrators (AAMVA), Vehicle Inspection Subcommittee of the American Automobile Manufacturers Association (AAMA), National Transportation Safety Administration (NHTSA), Utah State Criminal and Traffic Code, Federal Motor Vehicle Safety Standards (FMVSS), Commercial Vehicle Safety Alliance (CVSA) and the Code of Federal Regulations (CFR's). In addition, the Safety Inspection office is advised by the Motor Vehicle Safety Inspection Advisory Council on the adoption and implementation of Safety Inspection Standards.

This manual contains minimum standards relating to motor vehicle safety. It is expected that individual inspectors, inspection managers, fleet inspection stations and public inspection stations involved with the Safety Inspection program be familiar with this manual. Every effort has been made to provide specific inspection recommendations and procedures that will allow for the safe operation of motor vehicles on Utah's highways.

The Safety Inspection staff is committed to the safety of the motoring public. We recognize that those involved with the Safety Inspection Program are also concerned with vehicle safety. This revised manual has changes that place more responsibility on owners for repairs of non-safety critical items. Many of these changes reflect the same requirements as the commercial motor vehicle industry.

In addition to changes to the manual, Safety Inspection is reviewing its operating policies and procedures. Utah law requires the Safety Inspection office to "investigate complaints" and to protect consumers from "unwanted or unneeded repairs or adjustments", 53-8-204 UCA. To protect the integrity of the Safety Inspection program, those who violate these provisions will be dealt with both civilly and criminally.

Safety Inspection encourages all those who participate in this program to become familiar with these rules. This program is only successful with the cooperation and determination of the many stations and inspectors found throughout the state. Safety Inspection looks forward to any comments, concerns or questions that may arise in carrying out our objective of safer vehicles for Utah's highways.

This Manual supersedes all previous manuals and shall be used in determining the pass/fail condition of vehicle equipment.

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SECTION 1 - REGISTRATION

The first step in the inspection of a vehicle is a review of the registration papers. Vehicles with out-of-state registration or vehicles with no registration can be inspected. These requirements apply to passenger cars, light trucks, motorcycles, heavy trucks, trailers, and buses.

A. AGREEMENT AMONG PAPERS

Check vehicle registration certificate, identification number on vehicle, license plate and vehicle description for agreement. Record the manufacturers VIN Plate Number on the safety inspection certificate.

ADVISE motorcycle when:

Paperwork disagreements are accidental and clerical in nature.

REJECT motorcycle when:

Registration certificate, identification number, license plate and vehicle description are not in agreement.

NOTE: Verification of VIN is required on all inspections.

B. PLATE MOUNTING

If the vehicle is registered, inspect the license plates to see that they are securely mounted and are clearly visible.

ADVISE motorcycle when:

Plates are not securely fastened, obscured or cannot be clearly identified.

(Motorcycles are issued one license plate only, which is required to be displayed on the rear of the motorcycle.)

ADVISE motorcycle when:

Plates have tinted or colored covers. License plates must be visible from 100 feet.
(41-1a-403 UCA and 41-1a-404 UCA)

SECTION 2 - TIRES AND WHEELS

A. WHEELS

- 1) Check wheel bolts.

REJECT motorcycle when:

Wheel bolts or nuts are loose, missing or damaged.

- 2) Check wheels for damage and trueness.

REJECT motorcycle when:

- a) Any part of the wheel is bent, out of round, cracked, re-welded or if any spokes are missing, loose or broken.
- b) Wheel is not centered on the axle or wobbles in excess of 3/16 inch.

- 3) Check bearings by grasping the tire at the top and bottom and rocking it in and out.

REJECT motorcycle when:

Wheel bearing play exceeds the manufacturer's recommended tolerances.

B. TIRES

- 1) Check tread wear indicators

REJECT motorcycle when:

Any tread wear indicator contacts the road.

- 2) Check tires without tread wear indicators

REJECT motorcycle when:

The tread is worn to 2/32 inch or less across a total of 1/3 of the total tread width for 10 inches of tread circumference.

NOTE: Tread depth should not be measured on wear bars.

TIRES AND WHEELS - Continued

- 3) Check tires for cord exposure, tread cuts, snags or sidewall cracks.

REJECT motorcycle when:

- a) A tire has worn a worn spot(s) that expose the cord through the tread.
- b) Tread cuts, snags or sidewall cracks are in excess of one inch in any direction and deep enough to expose cords

- 4) Check for bumps, bulges or knots.

REJECT motorcycle when:

A tire has visible bumps, bulges, or knots indicating partial failure or separation of the tire structure.

- 5) Check for re-grooved, re-cut or not for highway use tire.

REJECT motorcycle when:

A tire has been re-grooved, re-cut, or is marked “NOT FOR HIGHWAY USE”.

- 6) Check valve stems.

REJECT motorcycle when:

Rubber stems are cracked or cut and if metal stem lock nut is missing.

SECTION 3 - STEERING

A. SWING ARM BUSHING

- 1) Check swing arm bushing. Steering components should be adjusted according to the manufacturer's tolerances.

REJECT motorcycle when:

Swing arm bushing is worn beyond manufacturer's recommended specifications.

B. STEERING HEAD INSPECTIONS

- 1) Check the steering head bearing and front forks.

REJECT motorcycle when:

- a) The steering head bearing adjustment does not meet the manufacturer's recommended torque value maximum for turning.
- b) There is detectable play or roughness within the steering head bearings.
- c) Front forks do not fully turn from center to one side or the other, under its own weight, when turned 5 degrees from a straight ahead position.

C. WHEEL ALIGNMENT LONGITUDINAL INSPECTIONS

- 1) Check the rear wheel centerline.

REJECT motorcycle when:

The rear wheel centerline does not pass within ½ inch of the front wheel centerline when measured at a point directly below the front axle.

STEERING - Continued

D. HANDLEBAR INSPECTION

- 1) Check the handlebar for proper construction.

NOTE: The handlebar must be constructed of at least .060 inch thick steel tubing.

REJECT motorcycle when:

- a) Cracks, deformation or improper alignment is found.
- b) If handlebars move up and down.
- c) If handlebars are 15 inches or more above that portion of the seat occupied by the rider when occupied and depressed by his/her weight.
- d) If throttle grip is broken or missing.

E. FRONT FORKS INSPECTION

- 1) Inspect front forks for looseness, binding and leakage.

REJECT motorcycle when:

Forks are loose, or there is evidence of binding or leakage.

SECTION 4 - BRAKES

A. MECHANICAL BRAKE SYSTEM

- 1) Check motorcycle when it is equipped with both front and rear brakes, there must be adequate braking at both wheels.

REJECT motorcycle when:

Either brake fails to indicate adequate braking.

- 2) Check hand levers and foot pedals.

REJECT motorcycle when:

- a) Lever is broken or if sufficient leverage cannot be applied.
- b) Lever or pedal is improperly positioned, misaligned or is not free to return.
- c) Brake lever does not have at least 1/3 travel reserve when brakes are applied.
- d) Modifications make lever or pedal inaccessible for adequate leverage and safe operation.
- e) Lever or pedal is rusted, frozen or inoperative.

- 3) Check the adjusters, actuating cam, cam shaft, anchor pins, springs and linkage for wear and looseness.

REJECT motorcycle when:

- a) Brake adjusters are unable to be locked.
- b) Brake adjustment changes when the fork is extended
- c) Brake arm travels more than 20% when fully applied.
- d) The cam-operating lever has been repositioned on the shaft to avoid replacing a worn cam, worn shoes or worn lining.
- e) There is friction in linkage or components.
- f) There is wear in the cam or if springs are not strong enough to return and hold shoes against cam.
- g) Any brake component is missing or broken.

SECTION 4 – BRAKES - CONTINUED

A. MECHANICAL BRAKE SYSTEM – (Continued)

- 4) Check springs, cables, cotter pins, devices, couplings and grease retainers.

REJECT motorcycle when:

- a) Cables are frayed, broken, routed between fork and frame or pins and/or devices are worn.
- b) Cotter pins are missing or broken.
- c) Cables are rusted or frozen.
- d) Grease retainers are leaking.

B. HYDRAULIC BRAKE SYSTEM

Check hydraulic hoses and tubing for leaks, cracks, chafing, flattened or restricted sections.

REJECT motorcycle when:

- a) Hoses or tubing leak.
- b) Hoses are cracked or chafed exposing metal or fabric cord.
- c) Hoses are flattened or restricted.
- d) Hoses and tubes are not securely fastened.
- e) The master cylinder leaks or the fluid level is lower than the manufacturer specifications.
- f) Leakage is noted anywhere in the braking system or wheel cylinder.

C. LINING AND PADS

Check linings for contamination and wear.

REJECT motorcycle when:

- a) Linings are contaminated with oil, grease or brake fluid.
- b) The thinnest point of the lining measures 1/32 inch or less.
- c) Arrow is past the last mark on the wear indicating plate.

NOTE: *On motorcycles with an enclosed rear drum, check the wear indicator or adjustment indicator arrows. Disassembly not required.*

SECTION 4 – BRAKES - CONTINUED

D. BRAKE DRUMS

Check for external cracks, mechanical damage or wear beyond manufacturers specifications.

REJECT motorcycle when:

- a) There are external cracks or evidence of mechanical damage.
- b) Brake drum is worn beyond the manufacturers specifications.

E. BRAKE ROTOR

Check rotors and friction surface for mechanical damage or contamination and wear beyond manufacturers specifications.

REJECT motorcycle when:

- a) A crack extends to the edge of rotor or there is evidence of mechanical damage.
- b) The friction surface is contaminated.
- c) The rotor is worn beyond manufacturers specifications.

SECTION 5 – LIGHTING

A. HEADLAMPS

Check for proper headlamp equipment and proper functioning.

REJECT motorcycle when:

- a) Headlamp is not marked USDOT approved.
- b) Headlamp minimum height is less than 24 inches or more than 54 inches above the road surface.
- c) The high beam indicator fails to function when equipped.
- d) Headlamp fails to light, or headlamp switch fails to function.

NOTE: *One headlamp is required and not more than two lamps are permitted.*

B. HEADLAMP AIMING

Headlamps must be checked using mechanical aimers, an aiming screen or an optical aiming device.

Low beam must be within four (4) inches of the center line at 25 feet. Measure straight out from the center of the headlamp.

High beam is aimed to three (3) inches below the center line at 25 feet and must be within four inches measured straight out from the center of the headlamp.

REJECT motorcycle when:

Low and/or high beam are out of adjustment.

C. TURN SIGNALS

Check turn signal operation for proper functioning.

REJECT motorcycle when:

- a) Turn signals fail to function properly.
- b) Turn signal lamps do not indicate white or amber to the front and red or amber to the rear.

NOTE: *When a motorcycle is originally equipped with turn signals, they must be present and function as designed.*

SECTION 5 – LIGHTING - CONTINUED

D. STOP LAMPS

Check for stop lamp.

REJECT motorcycle when:

- a) Stop lamp fails to operate when brakes are applied.
- b) Stop lamp is not red in color.

NOTE: As of January 1, 1969 the stop lamp must operate with the front brake application and separately with the application of the rear brake.

E. TAILLAMPS

Check for tail lamp.

REJECT motorcycle when:

At least one red tail lamp is not present. The lamp must be visible from 500 feet to the rear at night on motorcycles manufactured before January 1, 1969 and 1,000 feet on motorcycles manufactured after January 1, 1969.

F. REAR REFLECTOR

Check for rear reflector.

REJECT motorcycle when:

Reflectors are missing or are not red in color.

NOTE: When one reflector is used, it must be mounted at the rear centerline. If two reflectors are used, they must be symmetrically disposed about the rear centerline. Reflectors must be red in color.

G. DRIVING LIGHTS

Check for driving light operation.

REJECT motorcycle when:

Driving light comes on with headlamp or is not properly aimed.

SECTION 6 – ELECTRICAL SYSTEM

A. HORN

Check for proper functioning of horn component.

REJECT motorcycle when:

- a) Horn is missing, loose, fails to function or is not electrical.
- b) The horn button is not easily accessible.
- c) The horn is not audible for at least 200 feet.

B. SWITCH

Check for proper functioning of switches.

REJECT motorcycle when:

Any required switch is broken, missing or fails to function properly.
(Required switches include headlight high/low, engine kill, turn signal and brake light.)

C. WIRING INSPECTION

Check for proper functioning of wiring.

REJECT motorcycle when:

Insulation is worn, bare, or shows evidence of short circuiting and/or is inadequate to operate items properly.

D. CONNECTION INSPECTION

Check for loose connections and proper functioning.

REJECT motorcycle when:

Connections are loose, corroded or fail to function properly.

SECTION 7 - WINDSHIELD

A windshield is NOT required. However, if there is one present, check the following:

A. WINDSHIELD

Check windshield if equipped for cracks, scratches, discoloration, obstruction, light transmittance and for approved type of windshield.

REJECT motorcycle when:

- a) Vision is obstructed due to cracks, scratches or discoloration.
- b) Windshield is not an approved type.
- c) Stiffener device is mounted in the line of vision.
- d) There is less than 70% light transmittance.

SECTION 8 – FRAME AND BODY

A. FRAME

Check frame for welds, cracks or structural damage.

REJECT motorcycle when:

There are welds, cracks, or structural damage that constitutes a hazard.

B. FENDER

Check fenders for proper mounting, cracks, breaks, bends and sharp edges.

REJECT motorcycle when:

Fenders are missing, improperly mounted, cracked, bent or have sharp edges.

NOTE: The front fender must cover 45 degrees to the front and 90 degrees to the rear. The rear fender must cover the top half of the tire.

C. CHAIN AND SPROCKET

Check chain, sprocket and protective guards for proper operation

REJECT motorcycle when:

- a) Chain is worn.
- b) Sprocket is worn.
- c) Chain guard(s) is/are missing, broken or cracked.

D. SEAT

- 1) Check seat for proper attachment.

REJECT motorcycle when:

Seat is not properly and securely attached. Locking device must function properly.

SECTION 8 – FRAME AND BODY- (Continued)

D. SEAT (Continued)

- 2) Check seat area for hand hold on seats designed for two people.

REJECT motorcycle when:

A hand hold is not present.

NOTE: When a seat is designed for two people, a properly attached hand hold device of sufficient strength and size must be provided to adequately support 200 pounds. (A stay strap or bar is acceptable.)

- 3) Check foot rests on motorcycles that have seats designed for two people.

REJECT motorcycle when:

Foot rests are not present.

NOTE: If a motorcycle is capable of carrying two people it must be equipped with a foot rest on each side where the passenger can safely rest his/her feet.

E. ENGINE MOUNTING

Check frame and mounting brackets on engine.

REJECT motorcycle when:

Engine mounting frame or brackets are cracked or broken.

F. STAND

Check motorcycle stand for proper operation

REJECT motorcycle when:

- a) Stand fails to hold the motorcycle in an up-right position.
- b) Stand fails to stay in the stored position or when they have to be held in position by wire or other method.
- c) The side or center stand is cracked, broken or loose.

SECTION 9 - EXHAUST SYSTEM

A. EXHAUST SYSTEM

Check exhaust system for proper operation and excessive noise

REJECT motorcycle when:

- a) Joints are loose or broken or if any leakage exists.
- b) Components are not properly mounted or supporting brackets are not secure.
- c) Muffler has been removed or is not functioning properly.
- c) Any muffler cutout or bypass is used.
- d) The exhaust system has been changed, or modified, and is not as effective as OEM specifications.

NOTE: *After Market Muffler Devices:*

(41-6-147 (b) UCA) Every motor vehicle shall at all times be equipped with a muffler or other effective noise suppression system in good working order and in constant operation. Excessive or unusual noise is prohibited.

SECTION 10 – FUEL SYSTEM

All motor fuel cells must be U.S. Department of Transportation approved.

A. FUEL SYSTEM

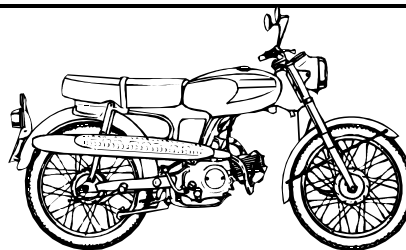
- 1) Check the fuel system for securement and for any leaks.
- 2) Check that fuel cell or gas tank is USDOT approved.
- 3) Check that fuel cell or gas tank is properly capped.

REJECT motorcycle when:

- a) Any part of the fuel system is not securely fastened.
- b) There is leakage at any point in the fuel system.
- c) The fuel tank is not properly capped.

SECTION 11 –TWO WHEEL DIRT BIKES

TWO WHEEL DIRT BIKES



Two wheel dirt bikes may be inspected provided that they have been modified to be street legal and shall be equipped with the following items, which shall comply with the regulations of the department. UCA 41-6-154.50

- 1) One head lamp which, when factory equipped with an automatic lighting ignition system, shall not be disconnected.
- 2) One tail lamp
- 3) Either a taillamp or a separate lamp which shall be so constructed and placed as to illuminate with a white light the rear registration plate.
- 4) One red reflector on the rear, either as part of the taillamp or separately.
- 5) One stop lamp.
- 6) A braking system, other than a parking brake, as provided in UCA 41-6-145.
- 7) A horn or warning device in accordance with UCA 41-6-146.
- 8) A muffler and emission control system in accordance with UCA 41-6-147.
- 9) A mirror in accordance with UCA 41-6-148.
- 10) Tires must be highway approved in accordance with UCA 41-6-150.
- 11) Non-metal gas tanks are acceptable.
- 12) Working odometers, although not a safety inspection requirement, are nevertheless required on all vehicles in order to be registered in the state of Utah

***NOTE: All Terrain Vehicles, (ATV's) and Off-Highway Vehicles, (OHV's) are not Certified, nor can they qualify for use on a public highway. DO NOT inspect ATV's or OHV's.
Low Speed Vehicles, LSV's must meet 49 CFR 571.500 and be inspected following the guidelines outlined in the Passenger Vehicle/Light Truck Manual.***

NOTE 2005: Mini-motorcycles do not meet headlight height requirements (Per 41-6-119 UCA, which references FMVSS 108 lighting chart). A mini-motorcycle cannot be safety inspected or registered in the state of Utah. (DO NOT INSPECT MINI-MOTORCYCLES.)



DO NOT INSPECT ATV's

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